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EXAMINER	
ELPENORD, CANDAL	
ART UNIT	**PAPER NUMBER**
2616	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/522,748	FUNATO, NOBUHIKO	
	Examiner	Art Unit	
	CANDAL ELPENORD	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 June 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-49* is/are pending in the application.

4a) Of the above claim(s) *29 and 45* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28,30-44 and 46-49* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 January 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :28 January 2005, 12 April 2006, March 13, 2008, July 21, 2008.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-45 have been considered but are moot in view of the new ground(s) of rejection.

2. Claims 1-11, 15-20, 21-26 have been amended, claims 29, 45 have been cancelled, claims 46-49 have been added.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. **Claims 1, 6, 9-10, 44, 47** are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldhor et al (US 6,625,656 B2) in view of Sen et al (US 6,691,312 B1) and further view of Laroia et al (US 2004/0258084 A1).

Regarding claim 1, Goldhor et al. discloses an intermittent communication method ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines14-20, "intermittently arriving data", recited in col. 22, lines 30-37) for data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15), comprising: a reception step for receiving data transmitted intermittently from a communication partner side and ("capture buffer receiving data as input", recited in col. 3, lines 6-15) for storing data received intermittently into a buffer memory (fig. 2, Capture Buffer 400 as FIFO for memory store, recited in col. 3, lines 8-21, lines 35-38); a playback step (fig. 2, Playback System 500, recited in col. 3, lines 35-43) for playing the stored data ("playback associated with buffer", recited in col. 6, lines 4-19) in the buffer memory (fig. 2, Capture Buffer 400 as FIFO for memory store, recited in col. 3, lines 8-21, in parallel with the reception step ("capture buffer receiving data as input", recited in col. 3, lines 6-15); and a first setup step for setting up a first intermittent (fig. 2, Transmission Rate Determiner 700 with the Capture Buffer Monitor 600, "determine the departure and arrival rate from the Capture Buffer 400, recited in col. 4, lines 34-51, see, fig. 7, System Clock 5300, recited in col. 13, lines 4-8) a first transmission schedule ("balance of data with data arrival", recited in col. 5, lines 28-46) which will not cause either overflow or underflow ("avoid overflow in the Capture Buffer 400", recited in col. 9, lines 35-44) of data in the buffer memory ("rate restricted by data arrival when a user request would cause underflow or overflow in the capture buffer 400", recited in col. 5, lines 28-46), based on a data characteristic of the data ("audio and audio-visual

work received for sources", recited in col. 2, lines 35-42, "frame per unit time", recited in col. 9, lines 49-55).

Regarding claim 6, Goldhor et al. discloses the intermittent communication method ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines 14-20, "intermittently arriving data", recited in col. 22, lines 30-37) for data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15), wherein the first intermittent transmission schedule ("determines of playback rate over time interval", recited in col. 6, lines 58-65) includes a data transmission rate (fig. 7, TSM Rate Determiner 700, "produces of a rate signal", recited in col. 5, lines 23-27).

Regarding claim 9, Goldhor et al. discloses the intermittent communication method ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines 14-20) for data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15) according to claim 6, wherein the data transmission rate is set at the maximum (see, "the maximum sustainable playback rate as a function of the arrival rate", recited in col. 6, lines 62 – col. 7, lines 42).

Regarding claim 10, the intermittent communication method ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines 14-20) for data communication apparatus (fig. 2,

Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15) according to claim 6, wherein the data transmission rate is set at the minimum (see, "the minimum sustainable playback rate as a function of the arrival rate", recited in col. 7, lines 51 – col. 8, lines 41).

Regarding claim 44, Goldhor et al. discloses a program recorded on a recording medium ("modules embodied as software programs", recited in col. 10, lines 37-49, fig. 2, Capture Buffer 400, "digital storage device such as CD-ROM, magnetic disc", recited in col. 4, lines 10-19) for making a data communication apparatus execute the intermittent communication method ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines 14-20).

Regarding claim 47, Goldhor et al. discloses the intermittent communication method ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines 14-20) for data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15), wherein the intermittent transmission schedule includes the time of transmission in each intermittent communication period (fig. 7, Data Departure Time Stamp Apparatus 5500 wherein each media portion is associated with an arrival time value, recited in col. 11, lines 36- 56).

Goldhor '656 discloses all the claimed limitations as set forth above.

Goldhor ‘656 is silent about the claimed features: **Regarding claim 1**, a proposal step for transmitting the first intermittent transmission schedule to a communication partner side to make a proposal of the first intermittent transmission schedule.

However, Sen ‘312 from the same field of endeavor discloses the above claimed features: a proposal step for transmitting the first intermittent transmission schedule to a communication partner side to make a proposal of the first intermittent transmission schedule (noted: distributing the determined transmission schedule to other nodes in order to accommodate difference in schedule, recited in col. 2, lines 19-29, col. 4, lines 56-67).

In view of the above, having the method and apparatus for providing continuous playback or distribution of multimedia information of Goldhor ‘656, and the method for multicasting video to multiple client nodes of Sen ‘312, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the features of Goldhor '656 by using features as taught by Sen '312 in order to provide distribution of video based on the rate constraints and transmission schedule as suggested in col. 3, lines 37-48.

Goldhor ‘656 and Sen ‘312 are silent with respect to claimed features: an electric power supply stop step for stopping electric power supply to an inter-node communicator during a non-transmission time based on a current intermittent transmission schedule of the data being transmitted intermittently.

However, Laroia ‘084 from the same field of endeavor discloses the above claimed features: an electric power supply stop step for stopping electric power supply

to an inter-node communicator during a non-transmission time based on a current intermittent transmission schedule of the data being transmitted intermittently (noted: base station and wireless controller with means for turning off (i.e. sleep mode when not in the standby mode of operation) the wireless terminal circuitry after receiving paging signals based on super time slots, paragraphs 0021, lines 1-10).

In view of the above, having the method and apparatus for providing continuous playback or distribution of multimedia information of Goldhor '656, the method for multicasting video to multiple client nodes of Sen '312, and the method and apparatus for transmitting paging messages using reduced power consumption of Laroia '084, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the features of Goldhor '656 with Sen '312 by using features as taught by Laroia '084 in order to provide power consumption which in preserve the life span of the terminal battery as suggested in paragraph 0021.

6. **Claims 2-5, 7- 8, 11-22, 46** are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldhor et al (US 6,625,656 B2) in view of Sen et al (US 6,691,312 B1), Laroia et al (US 2004/0258084 A1) as applied to claim 2 above and further view of Asar et al (US 7,197,557 B1).

Regarding claim 2, Goldhor et al. discloses the intermittent communication method ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines14-20, "intermittently arriving

data", recited in col. 22, lines 30-37) for data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15).

Regarding claim 3, Goldhor et al. discloses the intermittent communication method ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines14-20, "intermittently arriving data", recited in col. 22, lines 30-37) for data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15).

Regarding claim 4, Goldhor et al. discloses the intermittent communication method ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines 14-20, "intermittently arriving data", recited in col. 22, lines 30-37) for data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15).

Regarding claim 5, Goldhor et al. discloses the intermittent communication method ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines 14-20, "intermittently arriving data", recited in col. 22, lines 30-37) for data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15).

Regarding claim 7, Goldhor et al. discloses the intermittent communication method ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines 14-20, "intermittently arriving

data", recited in col. 22, lines 30-37) for data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15), wherein the first transmission schedule ("data transfer rate", recited in col. 3, lines 17-21) includes an amount of buffering of data ("sufficient amount of data in the Capture Buffer", recited in col. 3, lines 23-31) to be stored in advance in the buffer memory (fig. 1, Capture Buffer 400) from a start of data transmission from a transmitter (fig. 1, Streaming Data Source 100) to a beginning of playback (fig. 1, Playback System 800) on a receiver (fig. 1, User System 300).

Regarding claim 8, Goldhor et al. discloses the intermittent communication method ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines 14-20, "intermittently arriving data", recited in col. 22, lines 30-37) for data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15) according to claim 7, wherein the amount of buffering is set at the maximum ("the high threshold parameter value relating to the amount of data in the buffer", recited in col. 5, lines 1-8).

Regarding claim 11, Goldhor et al. discloses the intermittent communication method ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines 14-20) for data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 –

col. 3, lines 15) according to claim 1, wherein the first intermittent transmission schedule includes intermittent communication information that represents the amount of data transmission (TSM Rate Determiner 700, "determines a TSM rate for each segment in the capture buffer", recited in col. 6, lines 39-48) in one intermittent period (fig. 7, Data Departure Time Stamp Apparatus 5500, recited in col. 11, lines 36- 56).

Regarding claim 12, Goldhor et al. discloses the intermittent communication method ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines 14-20) for data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15), wherein the intermittent communication information includes the time of transmission in each intermittent communication period (fig. 7, Data Departure Time Stamp Apparatus 5500 wherein each media portion is associated with an arrival time value, recited in col. 11, lines 36- 56).

Regarding claim 13, Goldhor et al. discloses the intermittent communication method ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines 14-20) for data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15) , wherein the intermittent communication information includes the amount of data ("portion of the media data", recited in col. 36-56) transmission in each intermittent communication period (fig. 7, Data Departure Time Stamp Apparatus 5500 wherein each media portion is associated with an arrival time value, recited in col. 11, lines 36- 56).

Regarding claim 14, Goldhor et al. discloses the intermittent communication method ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines 14-20) for data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15) according to claim 11, wherein the intermittent communication information includes a data transmission rate ("data delivery rate of information from the source", recited in col. 5, lines 33-41) in each intermittent communication period (fig. 7, Data Departure Time Stamp Apparatus 5500, recited in col. 11, lines 36- 56).

Regarding claim 15, Goldhor et al. discloses the intermittent communication method ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines 14-20) for data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15).

Regarding claim 16, Goldhor et al. discloses the intermittent communication method ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines 14-20) for data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15).

Regarding claim 17, Goldhor et al. discloses the intermittent communication method("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines 14-20) for data communication

apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15).

Regarding claim 18, Goldhor et al. discloses the intermittent communication method ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines 14-20) for data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15), wherein a receiver (fig. 2, Capture Buffer 400 of the User System 300, recited in col. 3, lines 8-15) of the data implements the reception step, the playback step (fig. 2, Playback System 500) , the first setup step, the comparison step and the proposal step ("altering the data consumption rate using changes in the play rate", recited in col. 28-36).

Regarding claim 19, Goldhor et al. discloses the intermittent communication method ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines 14-20) for data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15) according to claim 16, wherein a transmitter of the data (FIG. 1, Streaming Data Source 100, recited in col. 3, lines 4-8) implements the first setup step while a receiver of the data implements the reception step (fig. 1, Capture Buffer 400), the playback step (fig. 1, Playback System 500), the comparison step and the proposal

step ("altering the data consumption rate using changes in the play rate", recited in col. 28-36).

Regarding claim 20, Goldhor et al. discloses the intermittent communication method for data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15) according to claim 16, wherein a transmitter (fig. 1, Streaming Data Source 100) of the data implements the first setup step, the comparison step and the proposal step ("altering the data consumption rate using changes in the play rate", recited in col. 28-36) while a receiver (fig. 1, User System 300) of the data implements data reception step (fig. 1, Capture Buffer 400) and the playback step (fig. 1, Playback System 800).

Regarding claim 21, Goldhor et al. discloses the intermittent communication method ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines 14-20) for data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15) according to claim 17, wherein the data is transmitted (see, fig. 2, Streaming Data Source 100, "providing media data to User System 300", recited in col. 3, lines 1-12) from a single transmitter (fig. 2, Streaming Data Source 100, recited in col. 2, lines 66 – col. 3, lines 8) to first and second receivers (fig. 2, User System 300, recited in col. 3, lines 1-8), and the modification step ("Time-Scale Modification so that a data drain rate is matched with streaming data rate", recited in col. 3, lines 48-63) is implemented between the transmitter (fig. 2, Streaming Data Source 100, recited in col. 2, lines 66 – col. 3, lines 8) and the first receiver (fig. 2, User System 300, recited in col.

3, lines 1-8), and between the transmitter (fig. 2, Streaming Data Source 100, recited in col. 2, lines 66 – col. 3, lines 8) and the second receiver (fig. 2, User System 300, recited in col. 3, lines 1-8).

Regarding claim 22, Goldhor et al. discloses the intermittent communication method ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines 14-20) for data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15), wherein the first setup step, the comparison step and the proposal step are executed in a data link layer in terms of an OSI layer model ("balance of a data consumption rate with the arrival rate when a user request would cause underflow or overflow", recited in col. 5, lines 29-46).

Goldhor '656 is silent about the claimed features:

Regarding claim 16, a comparison step for comparing the first intermittent transmission schedule with the current intermittent transmission schedule; wherein the proposal step is performed when the first intermittent transmission schedule is different from the current transmission schedule.

Regarding claim 17, wherein the communication partner side includes: a second setup step for setting up a second intermittent transmission schedule which will not cause either overflow or underflow of data in the buffer memory, based on the data characteristic; and a modification step for modifying the current intermittent transmission schedule into the first or second transmission schedule if the first and second schedules are identical.

Regarding claim 46, the intermittent communication method for data communication apparatus, further comprising: a second setup step for setting up a second intermittent transmission schedule in the communication partner side, based on the first intermittent transmission schedule; and a modification step for modifying the current intermittent transmission schedule into the second intermittent transmission schedule if the second intermittent transmission schedule is different from the current intermittent transmission schedule.

However, Sen '312 from the same field of endeavor discloses the above claimed features:

Regarding claim 16, a comparison step for comparing the first intermittent transmission schedule with a current transmission schedule ("difference in transmission schedule", recited in col. 4, lines 56-67); wherein the proposal step is performed when the first intermittent transmission schedule is different from the current transmission schedule (noted: distributing the determined transmission schedule, recited in col. 2, lines 19-29, the buffers at the internal nodes allow each other to accommodate the difference between the transmission schedules, recited in col. 4, lines 56-67).

Regarding claim 17, wherein the communication partner side (fig. 1, Internal Nodes 104, recited in col. 3, lines 49-60) includes: a second setup step for setting up a second intermittent transmission schedule which will not cause either overflow or underflow of data in the buffer memory ("computing of transmission schedules to avoid underflow or overflow at the client buffer", recited in col. 8, lines 19-40) based on the

data characteristic ("frame sizes of video", recited in col. 13, recited in col. 6-15); and a modification step for modifying the current intermittent transmission schedule into the first or second transmission schedule if the first and second schedules are identical (see, accommodate the difference in transmission schedule", recited in col. 4, lines 56-67).

Regarding claim 46, the intermittent communication method for data communication apparatus, further comprising: a second setup step for setting up a second intermittent transmission schedule ("computing of transmission schedules to avoid underflow or overflow at the client buffer", recited in col. 8, lines 19-40) in the communication partner side (fig. 1, Internal Nodes 104, recited in col. 3, lines 49-60), based on the first intermittent transmission schedule ("computing of transmission schedules to avoid underflow or overflow at the client buffer", recited in col. 8, lines 19-40; and a modification step for modifying the current intermittent transmission schedule into the second intermittent transmission schedule if the second intermittent transmission schedule is different from the current intermittent transmission schedule (see, accommodate the difference in transmission schedule", recited in col. 4, lines 56-67).

In view of the above, having the method and apparatus for providing continuous playback or distribution of multimedia information of Goldhor '656, and the method for multicasting video to multiple client nodes of Sen '312, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the features of Goldhor '656 by using features as taught by Sen '312 in order to provide distribution

of video based on the rate constraints and transmission schedule as suggested in col. 3, lines 37-48, col. 1, lines 55 to col. 2, lines 12.

Goldhor '656 and Sen '312 disclose all the claimed limitations with the exception of being silent with respect to claimed features: **Regarding claims 18-20**, the electric power supply stop step.

However, Laroia '084 from the same field of endeavor discloses the above features: **Regarding claims 18-20**, an electric power supply stop step for stopping electric power supply to an inter-node communicator during a non-transmission time based on a current intermittent transmission schedule of the data being transmitted intermittently (noted: base station and wireless controller with means for turning off (i.e. sleep mode when not in the standby mode of operation) the wireless terminal circuitry after receiving paging signals, paragraphs 0021, lines 1-10).

In view of the above, having the method and apparatus for providing continuous playback or distribution of multimedia information of Goldhor '656, the method for multicasting video to multiple client nodes of Sen '312, and the method and apparatus for transmitting paging messages using reduced power consumption of Laroia '084, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the features of Goldhor '656 with Sen '312 by using features as taught by Laroia '084 in order to provide power consumption which in preserve the life span of the terminal battery as suggested in paragraph 0021.

Goldhor '656, Sen '312, and Laroia '084 disclose all the claimed limitations with the exception of being silent with respect to claimed features:

Regarding claim 2, wherein the data characteristic includes an elapsed time after a start of data playback data and a necessary total amount of data up to the elapsed time.

Regarding claim 3, wherein the data characteristic is information that can lead a necessary total amount of data up to an elapsed time after a start of data playback.

Regarding claim 4, wherein the data characteristic includes a total amount of data that will have been used by the elapsed time.

Regarding claim 5, wherein the data characteristic is information that can lead a total amount of data that will have been used by the elapsed time.

Regarding claim 15, wherein the transmission schedule includes a start time of a new intermittent communication.

However, Asar '557 from the same field of endeavor discloses the above claimed features:

Regarding claim 2, wherein the data characteristic ("frame characteristics", recited in col. 8, lines 52-62) includes an elapsed time (fig. 8, "playback elapsed time") after a start of data playback data (fig. 8, "the playback elapsed time", recited in col. 7, lines 32-40) and a necessary total amount of data up to the elapsed time ("audio bandwidth", recited in col. 7, lines 41-48).

Regarding claim 3, wherein the data characteristic ("frame characteristics", recited in col. 8, lines 52-62) is information that can lead a necessary total amount of data up to an elapsed time after a start of data playback (fig. 8, "the playback elapsed time", recited in col. 7, lines 32-40).

Regarding claim 4, wherein the data characteristic ("frame characteristics", recited in col. 8, lines 52-62) includes a total amount of data ("audio bandwidth", recited in col. 7, lines 41-48) that will have been used by the elapsed time (fig. 8, "the playback elapsed time", recited in col. 7, lines 32-40).

Regarding claim 5, wherein the data characteristic ("frame characteristics", recited in col. 8, lines 52-62) is information that can lead a total amount of data that will have been used by the elapsed time (fig. 8, "the playback elapsed time", recited in col. 7, lines 32-40).

Regarding claim 15, wherein the transmission schedule (fig. 1, Scheduler 104, recited in col. 5, lines 16-28) includes a start time ("starting minute", recited in col. 5, lines 16-28) of a new intermittent communication ("schedule tasks based on specific time", recited in col. 16, lines 16-31).

In view of the above, having the method and apparatus for providing continuous playback or distribution of multimedia information of Goldhor '656, the method for multicasting video to multiple client nodes of Sen '312, the method and apparatus for transmitting paging messages using reduced power consumption of Laroia '084, and the method and system for evaluating quality of service for streaming video and audio of Asar '557, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the features or Goldhor '656 with Sen '312, Laroia '084 by using features as taught by Asar '557 in order to provide measurement performance of streaming media as suggested in col. 1, lines 57- col. 2, lines 8 for motivation.

7. **Claims 23-24, 48** are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldhor et al (US 6,625,656 B2) in view of Sen et al (US 6,691,312 B1) and further view of Laroia et al (US 2004/0258084 A1).

Regarding claim 23, Goldhor '656 discloses a data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15) for receiving data (fig. 2, User System 300, recited in col. 3, lines 4-12) transmitted intermittently ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines14-20, "intermittently arriving data", recited in col. 22, lines 30-37) from a transmitting side (fig. 2, Streaming Data Source 100, recited in col. 3, lines 1-9), storing the data ("buffered input data at the Capture Buffer 400", recited in col. 3, lines 35-43) into a buffer memory (fig. 2, Capture Buffer 400, recited in col. 3, lines 8-16) and playing the data stored ("playback associated with buffer", recited in col. 6, lines 4-19, fig. 2, Playback System 500, recited in col. 3, lines 35-43) in the buffer memory (fig. 2, Capture Buffer 400, recited in col. 3, lines 8-16) in real time in parallel ("data transmission which corresponds to real-time playback", recited in col. 22, lines 9-14) with the data storing ("playback associated with buffer", recited in col. 6, lines 4-19, comprising: a multimedia data communication controller (fig. 2, fig. 7, Time Scale Modification 800 and Time Scale Modification Rate Determiner 700) for setting up a intermittent transmission schedule (fig. 7, Time Scale Comparator, "computes a control parameter", recited in col. 12, lines 15-25, System Clock 5300, recited in col. 11, lines 43-56) which will not cause either overflow or underflow ("time scale modification desired to avoid data overflow or data overflow",

recited in col. 12, lines 44-49) during a real-time playback of the data ("data transmission which corresponds to real-time playback", recited in col. 22, lines 9-14), based on a data characteristic of the data ("stream of data representing portions of audio, audio-visual work", recited in col. 19, lines 7-15).

Regarding claim 24, Goldhor '656 discloses the data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15), wherein the intermittent transmission schedule includes a time interval for alternation of intermittent communication ("time scale modification to slow down the playback rate of the audio visual work in to match a data drain rate of the streaming data rate", recited in col. 3, lines 35-48), or the amount of data transmission for alternation of intermittent communication ("streaming data rate", recited in col. 3, lines 35-48).

Regarding claim 48, Goldhor '656 discloses the data communication apparatus(fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15), wherein the transmission schedule includes the amount to be changed of data transmission in each intermittent communication period ("time scale modification to slow down the playback rate of the audio visual work in to match a data drain rate of the streaming data rate", recited in col. 3, lines 35-48).

Goldhor '656 discloses all the claimed limitation with the exception of being silent with regard to the following features:

Regarding claim 23, and a communicator for transmitting the intermittent transmission schedule to the transmitting side in order to receive data transmitted intermittently based on the intermittent transmission schedule.

However, Sen '312 from the same field of endeavor discloses the above claimed features: a communicator (fig. 1, Multicasting server/gateway server 102, col. 3, lines 49-59) for transmitting the intermittent transmission schedule to the transmitting side in order to receive data transmitted intermittently based on the intermittent transmission schedule (noted: distributing of multicast video streaming to multiple clients nodes based on the computed schedules, col. 3, lines 25-27, 38-47).

In view of the above, having the method and apparatus for providing continuous playback or distribution of multimedia information of Goldhor '656, and the method for multicasting video to multiple client nodes of Sen '312, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the features of Goldhor '656 by using features as taught by Sen '312 in order to provide distribution of video based on the rate constraints and transmission schedule as suggested in col. 3, lines 37-48, col. 1, lines 55 to col. 2, lines 12.

Goldhor '656, and Sen '312 disclose all the claimed limitations with the exception of being silent with respect to claimed features: an electric power supply stop step for stopping electric power supply to communicator during a non-transmission time based on a current intermittent transmission schedule.

However, Laroia '084 from the same field of endeavor discloses the above claimed features: an electric power supply stop step for stopping electric power supply

to communicator during a non-transmission time based on a current intermittent transmission schedule (noted: base station and wireless controller with means for turning off (i.e. sleep mode when not in the standby mode of operation) the wireless terminal circuitry after receiving paging signals in associated time slots, paragraphs 0021, lines 1-10).

In view of the above, having the method and apparatus for providing continuous playback or distribution of multimedia information of Goldhor ‘656, the method for multicasting video to multiple client nodes of Sen ‘312, and the method and apparatus for transmitting paging messages using reduced power consumption of Laroia '084, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the features of Goldhor '656 with Sen '312 by using features as taught by Laroia ‘084 in order to provide power consumption which in preserve the life span of the terminal battery as suggested in paragraph 0021.

8. **Claims 25-28, 30-43, 49** are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldhor et al (US 6,625,656 B2) in view Asar et al (US 7,197,557) in further view of Sen et al (US 6,691,312 B1), and Laroia et al (2004/0258084 A1).

Regarding claim 25, Goldhor et al. discloses a data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15) for playing received data (fig. 2, Playback System 500, recited in col. 3, lines 35-43, "playback associated with buffer”, recited in col. 6, lines 4-19), comprising: an inter-node communicator (fig. 11, Intermediate Server Node 250, recited in col. 18, lines 12-19) for

transmission of a transmission schedule to and for reception of data from a communication partner appliance (fig. 11, User System 317, recited in col. 18, lines 19-31); a buffer memory for storing the data received (fig. 11, Capture Buffer 400, recited in col. 18, lines 32-44) by the inter-node communicator (fig. 11, Intermediate Server Node 250, recited in col. 18, lines 12-19); a data player for playing the storage data (fig. 2, Playback System 500, recited in col. 3, lines 35-43, "playback associated with buffer", recited in col. 6, lines 4-19), stored in the buffer memory (fig. 11, Capture Buffer 400, recited in col. 18, lines 32-44) in parallel while the buffer memory is implementing a buffering process of storing the data ("play rate associated with buffer", recited in col. 6, lines 4-15).

Regarding claim 26, Goldhor et al. discloses a data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15), comprising: an inter-node communicator (fig. 11, Intermediate Server Node 250, recited in col. 18, lines 12-19) for transmitting data to a communication partner appliance (fig. 11, User System 317, recited in col. 18, lines 19-31).

Regarding claims 27-33, discloses the data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15).

Regarding claim 34, the data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15) according to claim 25 or 26, wherein the transmission schedule includes a data transmission rate (“arrival rates”, recited in col. 5, lines 28-33).

Regarding claim 35, the data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15), wherein the first transmission schedule ("data transfer rate", recited in col. 3, lines 17-21) includes an amount of buffering of data ("sufficient amount of data in the Capture Buffer", recited in col. 3, lines 23-31) to be stored in advance in the buffer memory (fig. 1, Capture Buffer 400) from a start of data transmission from a transmitter (fig. 1, Streaming Data Source 100) to a beginning of playback (fig. 1, Playback System 800) on a receiver (fig. 1, User System 300).

Regarding claim 36, Goldhor et al. discloses the data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 to col. col. 3, lines 15), wherein the amount of buffering is set at the maximum ("the high threshold parameter value relating to the amount of data in the buffer", recited in col. 5, lines 1-8).

Regarding claim 37, Goldhor et al. discloses the data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15), wherein the data transmission rate is set at the maximum (see, "the maximum sustainable playback rate as a function of the arrival rate", recited in col. 6, lines 62 – col. 7, lines 42).

Regarding claim 38, Goldhor et al. discloses the data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15), wherein the data transmission rate is set at the minimum (see, "the minimum sustainable playback rate as a function of the arrival rate", recited in col. 7, lines 51– col. 8, lines 41).

Regarding claim 39, Goldhor et al. discloses data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15), wherein the intermittent communication information ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines 14-20) for data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15), wherein the intermittent communication information includes the amount of data ("portion of the media data", recited in col. 36-56) transmission in each intermittent communication period (fig. 7, Data Departure Time Stamp Apparatus 5500, recited in col. 11, lines 36-56).

Regarding claim 40, Goldhor et al. discloses the data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15), wherein the intermittent communication information ("intermittently arriving data", recited in col. 22, lines 30-37) includes a time of transmission in each intermittent communication period (fig. 7, Data Departure Time Stamp Apparatus 5500, recited in col. 11, lines 36- 56).

Regarding claim 41, Goldhor et al. discloses the data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15), wherein the intermittent communication information ("intermittently arriving data", recited in col. 22, lines 30-37) includes an amount of data ("portion of the media data", recited in col. 36-56) transmission in each intermittent communication period (fig. 7, Data Departure Time Stamp Apparatus 5500, recited in col. 11, lines 36- 56).

Regarding claim 42, Goldhor et al. discloses the data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15), wherein the intermittent communication information includes a data transmission rate ("data delivery rate of information from the source", recited in col. 5, lines 33-41) in each intermittent communication period (fig. 7, Data Departure Time Stamp Apparatus 5500, recited in col. 11, lines 36- 56).

Regarding claim 49, Goldhor et al. discloses the intermittent communication method ("method and apparatus for providing continuous playback of media and audio and audio-visual works received", recited in col. 2, lines 14-20) for data communication apparatus (fig. 2, Continuous Playback Apparatus 1000, recited ion col. 2, lines 66 – col. 3, lines 15), wherein the intermittent transmission schedule includes the time of transmission in each intermittent communication period (fig. 7, Data Departure Time Stamp Apparatus 5500 wherein each media portion is associated with an arrival time value, recited in col. 11, lines 36- 56).

Goldhor '656 discloses all the claimed limitations with the exception of being silent with respect to claimed features:

Regarding claim 25, a data quality manager for storing quality management information of the received data to be played; the quality management information; wherein the transmission schedule is set up based on the quality management information.

Regarding claim 26, a data quality manager for storing quality management information of the data; the quality management information; wherein the transmission

of the data is performed based on the transmission schedule and the transmission schedule is set up based on the quality management information.

Regarding claim 27, a data quality reference portion for transmitting the quality management information from the data quality manager to the schedule judging portion, wherein the transmission schedule is set up by the schedule judging portion.

Regarding claim 28, a data quality reference portion for acquiring the quality management information from the data quality manager and setting up the transmission schedule.

Regarding claim 30, wherein the quality management information includes an elapsed time after a start of playback of the data and a necessary total amount of data up to the elapsed time.

Regarding claim 31, wherein the quality management information is information that can lead the necessary total amount of data up to an elapsed time after a start of playback of the data.

Regarding claim 32, wherein the quality management information includes a total amount of data that will have been used by the elapsed time.

Regarding claim 33, wherein the quality management information is information that can lead a total amount of data that will have been used by the elapsed time.

However, Asar '557 from the same field of endeavor discloses the above claimed features:

Regarding claim 25, a data quality manager for storing quality management information ("sending of performance measurements to storage device", recited 2, lines

9-16) the received data to be played (fig. 1, System for monitoring performance for streaming and quality", recited in col. 3, lines 7-19); the quality management information ("performance measurements", recited in col. 7, lines 41-48); wherein the transmission schedule (fig. 1, Scheduler 104) is set up based on the quality management information ("computes of schedule based on performance measurement", recited in col. 5, lines 17-27).

Regarding claim 26, a data quality manager for storing quality management information ("sending of performance measurements to storage device", recited 2, lines 9-16) of the data (fig. 1, System for monitoring performance for streaming and quality", recited in col. 3, lines 7-19); the quality management information ("performance measurements", recited in col. 7, lines 41-48) wherein the transmission of the data (noted: using the performance measurements for delivery of streaming data based on the transmission schedule, col. 5, lines 7-15) is performed based on the transmission schedule (fig. 1, Scheduler 104) and the transmission schedule is set up based on the quality management information ("computes of schedule based on performance measurements", recited in col. 5, lines 17-27).

Regarding claim 27, a data quality reference portion (fig. 6, Measurement Data 130, recited in col. 7, lines 2-20, fig. 9, Streaming quality) for transmitting the quality management information (fig. 1, Data Delivery System 98, "delivering performance", recited in col. 4, lines 46-59) from the data quality manager (fig. 1, System for monitoring performance for streaming and quality", recited in col. 3, lines 7-19) to the schedule judging portion (fig. 1, Scheduler 104, recited in col. 5, lines 17-34), wherein

the transmission schedule ("the scheduler configured to schedule based on measurement", recited in col. 5, lines 37-42) is set up by the schedule judging portion (fig. 1, Scheduler 104, recited in col. 5, lines 17-34).

Regarding claim 28, a data quality reference portion (fig. 6, Measurement Data 130, recited in col. 7, lines 2-20) for acquiring the quality management information from the data quality manager (fig. 1, System for monitoring performance for streaming and quality", recited in col. 3, lines 7-19) and setting up the transmission schedule ("computes of schedule", recited in col. 5, lines 17-25).

Regarding claim 30, wherein the quality management information (fig. 1, System for monitoring performance for streaming and quality", recited in col. 3, lines 7-19) includes an elapsed time (fig. 8, "playback elapsed time") after a start of playback of the data (fig. 8, "the playback elapsed time", recited in col. 7, lines 32-40) and a necessary total amount of data up to the elapsed time ("audio bandwidth", recited in col. 7, lines 41-48).

Regarding claim 31, wherein the quality management information (fig. 8, "the playback elapsed time", recited in col. 7, lines 32-40) is information that can lead the necessary total amount of data up ("audio bandwidth", recited in col. 7, lines 41-48) to an elapsed time after a start of playback of the data (fig. 8, "the playback elapsed time", recited in col. 7, lines 32-40).

Regarding claim 32, wherein the quality management information ("performance measurements", recited in col. 7, lines 41-48) includes a total amount of data that will

have been used by the elapsed time (fig. 8, “playback elapsed time", “the number of frames, average audio bandwidth”, recited in col. 7, lines 41-48).

Regarding claim 33, wherein the quality management information is information (“performance measurements”, recited in col. 7, lines 41-48) that can lead a total amount of data that will have been used by the elapsed time (“audio bandwidth”, recited in col. 7, lines 41-48).

Regarding claim 43, wherein the transmission schedule (fig. 1, Scheduler 104, recited in col. 5, lines 16-28) includes a start time (“starting minute”, recited in col. 5, lines 16-28) of a new intermittent communication (“schedule tasks based on specific time", recited in col. 16, lines 16-31).

In view of the above, having the method and apparatus for providing continuous playback or distribution of multimedia information of Goldhor ‘656, the method and system for evaluating quality of service for streaming video and audio of Asar ‘557, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the features or Goldhor ‘656 by using features as taught by Asar ‘557 in order to provide measurement performance of streaming media as suggested in col. 1, lines 57- col. 2, lines 8 for motivation.

Goldhor et al. and Asar et al. disclose all the claimed limitation with the exception of being silent with respect to claimed features:

Regarding claim 25, a schedule judging portion for transmitting via the inter-node communicator a transmission schedule of the data to the communication partner

appliance, according to which the buffer memory will not cause either overflow or underflow.

Regarding claim 26, a schedule judging portion for transmitting via the inter-node communicator a transmission schedule of the data to the communication partner appliance, according to which the buffer memory will not cause either overflow or underflow.

However, Sen '312 from the same field of endeavor discloses the above claimed features:

Regarding claim 25, a schedule judging portion (noted: determining of a transmission schedule for each respective node, col. 13, lines 9-19) for transmitting via the inter-node communicator (noted: the parent node distributing the schedule to its child nodes, col. 13, lines 9-19) a transmission schedule of the data to the communication partner appliance, ("transmission of schedule", recited in col. 4, lines 55-67, see determining and distributing of the transmission schedule to the child nodes, col. 13, lines 9-19), according to which the buffer memory will not cause either overflow or underflow ("feasible transmission of schedule to avoid buffer underflow and overflow", recited in col. 8, lines 19-40).

Regarding claim 26, a schedule judging portion (noted: determining of a transmission schedule for each respective node, col. 13, lines 9-19) for transmitting via the inter-node communicator (noted: the parent node distributing the schedule to its child nodes, col. 13, lines 9-19) a transmission schedule of the data to the communication partner appliance ("transmission of schedule", recited in col. 4, lines 55-

67, see determining and distributing of the transmission schedule to the child nodes, col. 13, lines 9-19)), according to which a buffer memory of the communication partner appliance will not cause either overflow or underflow ("feasible transmission of schedule to avoid buffer underflow and overflow at the client buffer", recited in col. 8, lines 19-40), wherein the transmission schedule is set up based on the quality management information ("feasible schedule sets so that bandwidth constraints are satisfied", recited in col. 7, lines 55 - col. 8, lines 2).

In view of the above, having the method and apparatus for providing continuous playback or distribution of multimedia information of Goldhor '656, the method and system for evaluating quality of service for streaming video and audio of Asar '557, the method for multicasting video to multiple client nodes of Sen '312, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the features of Goldhor '656 with Asar '557 by using features as Sen '312 in order to provide distribution of video based on the rate constraints and transmission schedule as suggested in col. 3, lines 37-48, col. 1, lines 55 to col. 2, lines 12.

Goldhor '656, Asar '557 and Sen '312 disclose all the claimed limitations with the exception of being silent with respect to claimed features:

Regarding claim 25, an electrical power supply controller fro stopping electric power supply to the communicator during a non-transmission time based on the transmission schedule.

Regarding claim 26, an electrical power supply controller for stopping electric power supply to the communicator during a non-transmission time based on the transmission schedule.

However, Laroia '084 from the same field of endeavor discloses the above claimed features:

Regarding claim 25, an electrical power supply controller fro stopping electric power supply to the communicator (noted: turning off the power to the circuitry of the wireless terminal, paragraph 0021) during a non-transmission time based on the transmission schedule (noted: base station and wireless controller with means for turning off (i.e. sleep mode when not in the standby mode of operation) the wireless terminal circuitry after receiving paging signals in associated time slots, paragraphs 0021, lines 1-10).

Regarding claim 26, an electrical power supply controller for stopping electric power supply to the communicator (noted: turning off the power to the circuitry of the wireless terminal, paragraph 0021) during a non-transmission time based on the transmission schedule (noted: base station and wireless controller with means for turning off (i.e. sleep mode when not in the standby mode of operation) the wireless terminal circuitry after receiving paging signals in associated time slots, paragraphs 0021, lines 1-10).

In view of the above, having the method and apparatus for providing continuous playback or distribution of multimedia information of Goldhor ‘656, the method and system for evaluating quality of service for streaming video and audio of Asar ‘557, the

method for multicasting video to multiple client nodes of Sen '312, and the method and apparatus for transmitting paging messages using reduced power consumption of Laroia '084, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the features of Goldhor '656 with Asar '557, Sen '312 by using features as taught by Laroia '084 in order to provide power consumption which in preserve the life span of the terminal battery as suggested in paragraph 0021.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hejna et al (US 2003/0041158 A1), and Hagai et al (US 7,051,110 B2) and Muller et al (US 6,438,375 B1).

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CANDAL ELPENORD whose telephone number is (571)270-3123. The examiner can normally be reached on Monday through Friday 7:30AM to 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Bin Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Candal Elpenord/
Examiner, Art Unit 2616

/Kwang B. Yao/
Supervisory Patent Examiner, Art Unit 2616